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AUTHOR Keith, Pat
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ABSTRACT

This study investigated the relationship between role strain and several personal and organizational variables for teachers in self-contained classrooms and team teaching settings. Role strain was identified by the Job Related Tension Index; personal variables were identified by the Teacher Conception of the Educative Process Questionnaire; and organizational complexity and formalization were identified by an author-constructed questionnaire. The sample consisted of 404 elementary school teachers from 29 schools in a midwestern metropolitan area. Results indicated that 1) Teachers who work in more formalized settings experience less strain than teachers in less formalized settings. 2) Team teachers who have specialist training and are performing a specialist role have significantly lower strain scores than team teachers who have no specialist training but are acting as task specialists. 3) Teachers in teams in which there is less agreement about the teacher's role in the educative process report significantly higher strain than teachers in teams with more similarity in belief. 4) Team teachers in schools with new team teaching programs have significantly higher strain scores than team teachers in schools with established programs. No significant differences in strain were found between team teachers and teachers in self-contained classrooms. (RT)

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SOURCES AND CORRELATES OF ROLE STRAIN AMONG TEACHERS IN VARIED SETTINGS

Pat Keith, Iowa State University
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The Problem

The present study considers role strain, organizational variables, belief variables, and individual characteristics of teachers in varied organizational forms of teaching. The relationships between extent of strain, personal, and organizational variables are assessed for the self-contained classroom and collegial team teaching settings.

The few writings in the social psychology of education which speak at all of role strain in the teaching setting have primarily focused on conflict originating from differing expectations. (Backman & Secord, 1968). There has been less concern with strain or conflict that may have its source in teacher-teacher working relationships. This omission probably has its origin in the predominance of the self-contained classroom as an organizational form. In this form, individual autonomy is emphasized and teacher-teacher interaction in the instructional task is minimized. However, the new elementary education incorporates and highlights team and cooperative teaching with increased teacher-teacher interaction in the form of joint planning, scheduling, grouping, shared responsibility, and the establishment of close working relationships.

Role Conflict and Strain

The present study distinguishes between role conflict and role strain and concentrates on the latter. Secord and Backman (1964: 468) note that role strain is the broader of the two concepts in that "role conflict is generally

limited to situations where an actor is confronted with conflicting or competing expectations. Role strain covers not only those situations, but a great variety of others in which an actor experiences difficulty in meeting a role expectation."

Role strain, as presented by Goode (1960: 483), refers to the "felt difficulty in fulfilling role obligation." This was the meaning later incorporated in the Job Related Tension Index (JRT) by Snoek (1966). Biddle and Thomas (1966) make a useful distinction between role strain and threat, anxiety, and stress in general. The former is generated by role phenomena, whereas the latter have other sources. Thus, by focusing on role strain, this study is concerned with perceived difficulties in performing required role behavior. Therefore, job related strain refers to individual perceptions of difficulties surrounding role phenomena. This emphasizes the subjective, perceptual aspects of the relationship of an actor to role overload, ambiguity, and conflict.

Organizational Variables

Selection of the particular organizational variables presented in this study has its source in conflicting statements in the literature with respect to the relationship between bureaucracy, organizational size, complexity, formalization, and stress (Chapin, 1951; Hall, 1963; Hall, Haas, and Johnson, 1967). Studies using size as an indicator of bureaucracy report divergent findings as to the organizational size and amount of strain. While Snoek (1966) found that individuals in larger organizations report higher strain scores, Brown (1968), in a study of hospitals, reported an inverse relationship between size of work organization and strain scores. Snoek indicates the need for a better index of bureaucratization than size in order to test further hypotheses relating strain and organizational variables.

Hall, Haas, and Johnson (1967) suggest consideration of complexity and formalization as components of bureaucracy in addition to size. The indicators initially considered in the present study to denote complexity were (1) extent of subject matter specialization and (2) hierarchical arrangements among faculty and staff.[1]

Following Hall et al. in the present study the indicators of formalization are: (1) written directives, instructions, and communications; (2) the presence of written rules, policies, and specification of penalties; (3) and workshops and inservice training programs. Hall, et al. considered whether organizational size is a valid indicator of complexity and formalization. They concluded, using data from seventy-five organizations, that neither complexity nor formalization can be ascertained from knowledge of organizational size. The present study attempts to explore the relationship between levels of strain, degree of complexity and formalization.

Belief Variables

In addition to the relationship between organizational patterns and extent of strain, attention is also given to some belief variables. Two areas of teachers' conceptions of the educative process are considered: (1) the importance of subject matter mastery, and (2) teachers' direction of learning versus pupils' autonomy.

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[1] When hierarchical teams were unavailable for study, the second indicator was excluded.

Subject matter mastery refers to the belief that the mastery by the pupil of facts and information is a goal in and of itself. Teachers' direction of learning rather than pupils' autonomy applies to the distinction made by the teacher between his concerns for controlling and managing pupil activity on the one hand and his beliefs about the amount of freedom and initiative to be permitted for pupils on the other (Wehling, 1964).

The literature suggests that divergent beliefs about the teaching-learning process of teachers who work together may culminate in interpersonal difficulties (Shaplin, 1964). Team teaching settings which emphasize close working relationships among teachers provide an opportunity to investigate whether differing conceptions of teaching may relate to increased strain. The areas of belief indicated above are expected to be of concern to teachers sharing a group of students as in team teaching. Joint decisions and subsequent interaction related to emphasis on subject matter mastery and amount of direction by teachers appear to be among the primary tasks of cooperative teaching.

Method

The Sample

Respondents for the study were selected from twenty-nine public, elementary schools in a midwestern metropolitan area. Data was collected by means of a questionnaire; 404 (76%) of the elementary teachers contacted returned the questionnaire.

The questionnaire: Concepts and measures

The Job Related Tension Index (JRT) is used to measure the degree of role strain. Kahn, et al. (1964) identified a number of dimensions of job related tension; fifteen Likert-type items corresponding to each of these dimensions

were combined to form the JRT. The instrument incorporates assessment of role overload, person-role conflicts, inter-role conflict and ambiguity (Snoek, 1966).

The belief variables--the importance of subject matter mastery and teachers' direction of learning versus pupils' autonomy--were measured by items selected from the Teacher Conceptions of the Educative Process Questionnaire developed by Wehling (1964). Items were selected on the basis of high factor loadings and included what Wehling designated as the key item for the dimension.

Formalization and complexity are assessed from responses to items noted earlier.

Results
Organizational Variables

An initial hypothesis predicts that teachers who work in settings which are characterized by greater formalization will report less strain than will teachers in less formalized settings. To measure degree of formalization in a school, respondents were asked to report the presence or absence of each of the following in their work environment: a written list of rules; a faculty handbook; specification of penalties; written directives; workshops; and inservice training programs. Classification of the schools as to extent of formalization was done in the following way: the number of respondents in each school was multiplied by the number of possible affirmative reports of the above six indicators. Schools whose teachers responded with 50 percent or more affirmative responses are designated as more formalized while those schools whose teachers responded with fewer than 50 percent affirmative responses are said to be less formalized.

The finding is that formalization as an aspect of school organization is negatively related to role strain (See Table 1). Respondents from schools which are reported to have more formalization have significantly less strain than their counterparts in school organization that is designated as less formalized.

TABLE 1

COMPARISON OF STRAIN SCORES OF TEACHERS AND AMOUNT OF FORMALIZATION OF SCHOOL ORGANIZATION

Groups	N	Mean	S.D.	t	p
Less Formalization	195	2.27	.57	7.78	.001
More Formalization	209	1.92	.36		

The hypothesis that teachers in teams characterized by task specialization will report less strain than will team teachers in less "complex" settings was tested. Teachers were asked whether or not they have an area of subject matter specialization and whether or not their teams are characterized by task specialization. There is no significant difference between strain scores of team teachers who work in teams organized around task specialization and those who are in teams not characterized by task specialization.

A further hypothesis states that teachers who see themselves as subject matter specialists and who instruct in a specific area report less strain than specialists who do not instruct in their area of specialization. An analysis of variance of scores on job-related tension indicates none of the three independent variables by itself is significantly related to strain, but the three-way interaction

explains a significant portion of the variance ($F = 5.26$, $p<.05$).

Team teachers who have specialist training and are performing a specialist role have significantly lower strain scores than team teachers who have no specialist training but are acting as task specialists. Application of Duncan's Test indicates that this is not the case for teachers in self-contained classrooms who cooperate with other teachers in teaching certain subject matter areas. Team teachers who see themselves as specialists but are performing generalist roles have somewhat higher strain scores than do teachers in self-contained classrooms who state they have a specialty but are performing as generalists. These specialists who work as generalists also have higher strain scores than their non-specialist counterparts in teams. However, these differences a re not statistically significant.

TABLE 2

ANALYSIS OF VARIANCE OF ROLE STRAIN SCORES BY SPECIALIZATION AND PERFORMANCE OF A SPECIALIZED ROLE

Groups	D.F.	S.S.	M.S.	F	p
A (Classroom Organization)	1	.067	.067	.287	n.s.
B (Specialization)	1	.002	.002	.007	n.s.
C (Performance of Specialist and Non-specialist Roles)	1	.363	.363	1.514	n.s.
AXB	1	.033	.033	.139	n.s.
AXC	1	.185	.185	.771	n.s.
AXBXC	1	1.261	1.261	5.265	.02
Error	345	82.800	.240		
Total	352	84.711			

In summary, there is no difference in the amount of strain reported by teachers who work in teams organized around specialized tasks and those who work in teams which are not. However, team teachers who do not have specialist training but are performing specialist roles have significantly higher strain scores than team teachers who are trained as specialists and work as specialists.

Belief Variables

Based on the previous assumptions about the centrality of subject matter mastery and amount of teacher direction to cooperative relationships among team teachers, the following hypothesis was tested: teachers in teams characterized by large within team differences on scores on the belief dimensions tend to report higher strain than teachers on teams whose scores are similar.

Following Gross et. al. (1958), the variance was used as an estimate of within team differences on the dimensions. The hypothesis is supported; teachers in teams in which there is less agreement about teacher behavior with regard to emphasis on subject matter mastery and teacher direction tend to report higher strain than teachers in teams in which there is more similarity in belief. ($t = 2.40$ and 5.30, respectively).

TABLE 3

COMPARISON OF AVERAGE TEAM STRAIN SCORES BY WITHIN-TEAM DISSIMILARITY ON BELIEFS ABOUT SUBJECT MATTER MASTERY AND TEACHER DIRECTION

Groups	N	Mean	t	p
More Dissimilarity on Subject Matter Mastery	13	2.21	2.40	.05
Less Dissimilarity on Subject Matter Mastery	13	1.97		
More Dissimilarity on Teacher Direction	11	2.25	5.30	.001
Less Dissimilarity on Teacher Direction	15	1.93		

Role Strain and Teaching Experience

Two hypotheses were formulated around the variables of experience and strain; an additional statement considers length of time a team teaching program has been in operation and strain reported by teachers. The hypothesis that low experience tends to be accompanied by high strain scores is not supported. While teachers with one year or less experience report highest strain, Duncan's Test indicates that teachers with less experience do not report significantly higher strain scores than teachers in some of the higher experience categories. The hypothesis that teachers with less experience who work in self-contained classrooms report lower role strain than teachers with less experience who work in a collegial team setting is not supported. Analysis indicates that differences in strain for varying levels of experience are not accounted for by form of classroom organization.

However, the hypothesis that team teachers in schools with new team teaching programs will tend to have higher strain scores than team teachers in schools with established programs, is supported.

TABLE 4

COMPARISON OF STRAIN SCORES OF TEACHERS IN NEW AND ESTABLISHED TEAM TEACHING PROGRAMS

Groups	N	Mean	S.D.	t	p
New Programs	88	2.20	.46	3.57	.005
Established Programs	29	1.90	.30		

Discussion

Formalization and Complexity

In one sense the concept of formalization, as it relates to standardization of rules, procedures, and roles, follows the Weberian treatment of rules and their relationship to formal organization. For the present study, formalization as an aspect of organization and a possible source of role strain has proved a useful concept in exploring differences in strain.

The study indicates that, when perceived formalization is greater, felt difficulties in role performance tend to be less. Previously, diversification of role set has been investigated as a source of strain. Gross et al. (1958) and Kahn et al. (1964) found that role conflict occurred frequently in roles characterized by high diversification. Snoek (1966) also concludes that the necessity of maintaining working relationships with a wide variety of complementary roles is a source of strain. In the present study, no difference in strain was

found for teachers working in team and self-contained classrooms. The former are assumed to have the more diversified role set. Thus, in contrast to the above findings, rules and standardization (formalization) of relationships within and between role sets may be a key variable rather than actual number of different positions with which a person must interact. If there are statements of procedures, rules, and roles relating to decision making and issuing of instructions, directives, and conveying of information and feedback, then the mechanism for dealing with diverse role sets may be "formalized" or standardized and, thus, make for role clarity. The source of strain may not be in the required interaction with numerous and differing role sets, but rather may stem from ambiguous delineation of the interactive networks necessary to role performance. In summary, formalization is likely to have significant implications for role behavior and subsequent perception of difficulties in role performance. Formalization may be viewed as an alternative definition of lack of ambiguity as it appears in the Job Related Tension Index.

Complexity, as presented earlier, refers to the degree of internal segmentation characterizing an organization. Simon (1960) has distinguished between vertical and horizontal specialization; since no hierarchical teams were included in the sample, only the latter is treated here. Specialized teaching assignments based on special knowledge and competence in a particular subject area is a type of horizontal specialization. Strain reported by team teachers performing specialist roles is clearly related to role performance. Team teachers who have been trained for task specialties and perform specialized roles report significantly less strain than team teachers who work as specialists but have no specialized task training. Therefore, the present study gives some support to the

assumption that specialized training and performance of a specialized role clarifies tasks the individual is required to perform and may be accompanied by greater perceived competency and subsequently less role strain. That a generalist may perform a specialist role in the first place indicates a kind of complexity not usually associated with notions of levels of specialization based on formal training.

Belief Variables

The present study indicates that belief is a key element in a social system and suggests that dissimilarity in beliefs among individuals engaged in a cooperative effort has implications for subsequently reported job related tension. Dissimilarity in beliefs about the educative process among team members may represent varying expectations about performance of the role of teachers or the characteristics of the activities that are components of the role. While the impact of such differences may be buffered by the spatial and interpersonal organization of the self-contained classroom, the lack of consensus about the role of teacher becomes a major variable for consideration in teams or cooperative organization.

Role Strain in New and Established Programs

The finding that participants in new team teaching programs experience higher role strain than their counterparts in established team programs corresponds to the work of Secord and Backman (1964) in which they note that newly developed roles often lack clarity. Schwartz (1957) discusses the lack of clarity experienced by nurses when they enacted a new role. Also citing lack of clarity as a source of strain, Wardwell's study (1955) of chiropractors focuses on characteristics of emerging roles.

While Kahn et al. (1964) indicate that the degree to which a role incorporates innovative activity is associated significantly and positively with degree of role conflict and the amount of tension the role occupant experiences, the present study did not find that teachers working in teams report greater strain than teachers performing more traditional roles. However, Kahn cites one source of tension for the occupant of an innovative role as that of the "old guard" versus the "new guard." In an organization requiring high interdependence, this may tend to be a more important factor than in the elementary schools in which teachers who do not wish to team teach may remain as teachers in self-contained classrooms. Here again the ecological separation of the self-contained classroom and the low teacher-teacher interdependence may lessen potentialities for conflict and strain resulting from varying beliefs. The differences in strain that have been found within the group of team teachers suggest that the length of time a program has been in operation may be significant in the genesis of role strain.

March and Simon see parallels between innovative processes that are essential in initiating new programs in organizations and the "various intellective processes referred to by psychologists as 'problem-solving', productive thinking, creative thinking, invention, and the like" (1958: 177). After discussing the relationship between problem-solving and memory (in which is stored a repertoire of possible solutions to classes of problems that have been encountered in the past and components of problem solutions), they distinguish between productive and reproductive types of problem-solving. The productive kinds of problem-solving are those indicated above as the intellective processes; the reproductive types of problem-solving occur when "problem-solving consists

primarily in searching the memory in a relatively systematic fashion for solutions that are present in nearly finished form" (March and Simon, 1958: 177). Programmed activity may involve a great deal of problem-solving of a rather routine and reproductive sort; however, unprogrammed activity in innovation generally requires more "productive" problem-solving.

The assumption here is that a newly-created innovative organization is characterized by unprogrammed activity. In one respect, there is not a repertoire of possible solutions for recurring problems in organizational development. In a real sense, the organization does not have a history that may contain some of the ready-made solutions for routine tasks, much less for activities that require innovative behavior. Thus, in a newly-created innovative program at a point when time, effort, and energy may be needed for solving innovative or unprogrammed tasks, performance, of what in an established organization would be routine tasks, assume importance and make demands on resources that later in the development of the organization may be devoted to "productive" rather than "reproductive" problem solving. Yet, the expectations surrounding innovative activities and values placed on "productive" solutions may be maintained and in view of constraints noted above may be reflected in higher strain.

Summary

In summary, the present study considers some possible sources and correlates of job related tension; formalization as an aspect of organization and a possible source of perceived difficulties in role performance is useful in investigating differences in strain. It is indicated by the findings that amount of formalization as a characteristic of organization has implications for role

behavior and subsequent perceptions of difficulties in role performance. It is also suggested that both specialized training and performance of specialized tasks may aid in clarifying expected role behavior , thereby lessening some of the difficulties in performance that might be attributed to ambiguity. As a further aspect of organization, the extent to which a role or program is newly created has implications for the job related tension experienced by role occupants. In addition to characteristics of organization, dimensions of belief, perceptions about individual competency, and role overload may be considered as possible sources of perceived difficulties in role performance or role strain.

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